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Human participation in design process

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Abstract— Looking through human participation background in decision-making, renaissance would be the time that human beliefs have become an undeniable part in decisions made for different aspects of life and human values and requirements were centered on initiations.

Thereupon architect, designer, sociologist and decision maker were to follow the new approach of the world and thus, construction projects were not exempted from the new regulations. Since the time man as a client is theoretically involved in decision-making of a project, but design problems have not been resolved and we still face man made constructions having negative impact on the environment. Consequently, it seems that architects and decision makers did not succeeded to gather social values, economic and conceptual aspect of design and make a relative juxtaposition.

However, by understanding the design factors and client values, one can facilitate the interrelationship between architect and client. In other hand architecture is submissive to a number of factors from studying the cultural behavior of society to technological aspects of each project, which necessitates a close collaboration of a group in order to create a pattern devised uniquely to local environment and responsive to client needs as well. For this purpose, in 1968, social scientists initiated Environmental Design Research Association (EDRA) to raise interaction among architects, professionals and scientists to increase the quality of built environment concerning human values and expectations. They proposed programming in architecture, as an outcome. But despite being fruitful in commencing interrelation of people, designers and environment, this method has been neglected in educational process by design schools due to economical reasons. Thus, it would be necessary to figure out an educational system which focuses more on human needs in design process requiring user-oriented researches and behavioral analysis. Therefore the decision makers should allocate a specific budget to this method as a design phase in project.
This paper studies the general efforts done in resolving the problems mentioned and the critics followed.

Keywords-component; Environment, architect, client, cultur, society, architectural programming

Introduction

Every society no matter the system is ruled has its own goal and utopian approach, and in between, culture has the role to show subjective ideas of the society and architecture is a tool to illustrate the social culture, meaning the ideas, arts, customs, and social behavior of people in the society according to Oxford dictionary[1].

I. SOCIETY, CULTURE AND ARCHITECTURE

A. Social culture

In 20th century, culture became one of the main concepts of development in city planning and architectural projects with the goal of saving social identity and preference in time of globalization that art and culture are becoming the only differences between local identities and regions [2].
Therefore, city planning and Architecture has gained the role of introducing local identity of regions.

Herman Moutis one of the pioneers in theory of architecture points out that each building as an ingredient of architecture carries the responsibility of transforming a notion into a form so each building is an element to evaluate the culture of society[3]. Sometimes this role is overshadowed by imposing a functional concept, but building is likewise considered as a visual representative of the social opinion ignoring quality of the concept [3].

B. Cultural behavior

According to Gestalt psychology, which examines mind performance, mind interprets patterns then seeks for meaning and significance in all the sensory information received and finally a figurative image of place is shaped [4]. For instance analysis of this image apprises that people prefer coherent and comprehensible environment in which they have a sense of gathering without feeling lost in the place, and this is called the ideal environment.
Moreover, environmental psychology proves that enclosing environment affects people thoughts, interpretation of surrounding and also reactions in facing different places, to the extent that environment can cause stress, convey a message, impose a sense and even be constrictive to

movement of the people. A case in point is the renovation of Paris in the eighteenth century commissioned by Napoleon III that is based on critics ؛he had implemented the policies of the authoritarian regime through the sanitary system improvement.
This fact mostly presents the importance of environment in setting the trend of society toward future [4]. However, Léon Krier believes that radical modern system of planning and construction belittle local criteria and limits the social culture and life, apparently high-rise buildings disconnecting people and imposing individual life in cities are the outcome of new architectural scheme and not a user-oriented programming. [5]

C. Architecture؛ cultural element

One of the projects which clarifies the importance of local culture and environmental values is Pessac housing in France, designed by Le Corbusier (1920's). In this project, modern buildings were reformed into a different character after 3 years of abandon when local people were to move in. Although some described this event as a miscarriage of modernist [6], it was a confession of significant role of local values and requirements and importance of occupant and designer relationship in design process (Fig 1). Furthermore, it emphasizes that social behavior, culture, regulations, budget and context of the project should be taken into account by designer, and local ideals and preferences are top priorities and also it is inferred that generalization in architectural and city planning is not an appropriate solution for the domestic scale of construction. [7]

Fig 1: Le Corbusier Pessac, 1930's/1970's

II. USER ORIENTED SOLUTIONS

A. Client role in Architecture

Usually clients in construction sector are private corporations or government, so the architect does not have an individual client to know the exact requirement of the building and clients' criteria. However, involving laypeople and their values and preferences in architectural decisions and participation in construction especially in residential environments has become a debate for decades.

B. Client participation and critics

Considering design shortcomings, Sanoff Preiser proposed architectural programming as a framework in which different groups of people with their values and needs are involved in design process and the phase of formal contact between designer and client commences [7]. On the other hand this cooperation would raise a problem of defining what is required, how this could be accommodated by designer and which of the design alternatives would suit a variety of requirements.

Although participation of client in design process is not a problem in itself, there is a communication difficulty between people and architect. Nonetheless, when an architect designs a building for a corporation, the client is no longer an individual and there is a slight chance of having future habitant requirements as main issues of design.
Therefore, environmental modeling in different scales was proposed rather than graphic presentation to encourage people to participate in design process by having a tangible perception. But critics believed that design principles are more crucial than final appearance of buildings presented in the modeling phase and also not all design problems are taken into account by designing spatial boundaries of building.
On the other hand, there is no common interpretation between architect as an expert and laypeople as client. Considering that every person has a particular image of world and not even two individual have the same perception, so design modeling would not be an entire solution to utilize values and requirements, while even in physical modeling, the explicit parts of building are affected by local standards such as environmental, economical, cultural, social factors and regulations. So not a sole design modeling is capable to accommodate these values and requirements and a versatile strategy should be developed. [7]

C. Architectural programming

Hershberger (1999) proposed architectural programming as a step to distinguish the design problem in which the criteria of architect and client are uncovered [8].
Introducing architectural programming as a method to harmonize natural environment, people and man-made environment, the importance of client and programmer's values in decisions made before starting the design process is defined. For instance, the form of building designed by an architect would be affected differently when the client and programmer are mostly interested in functional capability of building or involved in social, environmental and economical parts.
In 1960s, Social scientist turned their attention into the built environment with concern of improving inappropriate built environments, so they founded Environmental Design Research Association (EDRA) to interact with architect, designer and professionals and concluded in developing research method to study human behavior in physical environment. This research method comprised of story

reviews, interviews, questionnaire, statistical analysis and studying people.

Obviously, this programming method has been a big help to large complex constructions especially the ones architects may not have enough knowledge about, such as prison, hence programming puts forward an interpretation of the values, purpose and needs of the client. But since this method is regarded as both time and money consuming, it was suggested to apply this method only to critical variables of the studied issue so the cost of the research would be allocated to those parameters that could cause an error in final project.

Indeed, this method has been responsive in assessment of client requirements, because designers have access to libraries, journals and critics of the same project, they also have the possibility of site participation and neighborhood studies and interviewing the client about their opinions before the design process begins. Thus this method would be one of the effective steps toward initiating the relationship between architect and client in which architect, based on the knowledge has gain during the study session and programming explains the problem to client and defines the main goal of design, then architect would be able to move in to design process.

III. CONCLUSION

Participation of client in design process is a stage in which people are taken into account to supervise decision makers of their environment. [9] And it is advised to start from the basic phases where professionals are planning for the future environment. So this necessitates teaching basic principles by modification of educational policies. Inasmuch as many architectural schools have underestimated the people role in programming their schedule due to the possible cost increase, or even not having enough facts to follow the idea, it conveys an impression in society that architects disregard user's needs and values and consequently lead to accommodations with unsatisfied habitants. [8]

According to the facts mentioned above, in order to build an environment corresponding to human expectations and requirements, we need to build a suitable infrastructure involving a group of professionals working with common concern and fulfilling the economic features and the regulations imposed by decision makers as well.

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